AMENDMENTS TO THE DRAWINGS:

The attached sheets of drawings include changes to Figs. 1, 2, 3 and 4. The sheet of Figs. 1, 2, 3 and 4 replace the original sheets of Figs. 1, 2, 3 and 4, respectively.

New drawings Figs. 6 and 7 are submitted herewith.

Attachment(s):Replacement Sheets (Figs. 1, 2, 3, 4)

Annotated Sheets Showing Changes (Figs. 1, 2, 3, 4)

Sheets of New Drawings (Figs. 6 and 7)

OIPE
AUG 05 2004
PATENT & TRADEMARK OFFICE

[NEW]

RECEIVED
AUG 0 9 2004
Technology Center 2600

Coding, using a coding device at a transmission side, each of the at least one message using a respective orthogonal function so as to form a transmission signal, each respective orthogonal function being an approximation of a respective Hermite function

34

Recovering, using a demodulation device at a receiving side, the at least one message from a received signal via a decoding using the respective Hermite function, the demodulation device including a Fourier-transform device for performing a Fourier transform on the received signal before the decoding, and including a respective first decoder unit corresponding to each of the at least one message, each respective first decoder unit including a respective first multiplier, a respective first integrator and a respective first discriminator connected in series, wherein each respective first decoder unit is for decoding the received signal in a time domain and wherein the demodulation device further includes a respective second decoder unit associated with each respective first decoder unit, each respective second decoder unit being for decoding the received signal in a frequency domain and including a respective second multiplier, a respective second integrator and a respective second discriminator connected in series

35

FIG. 7

AUG 05 2004
PATENT & TRADEMARK OFFICE

[NEW]

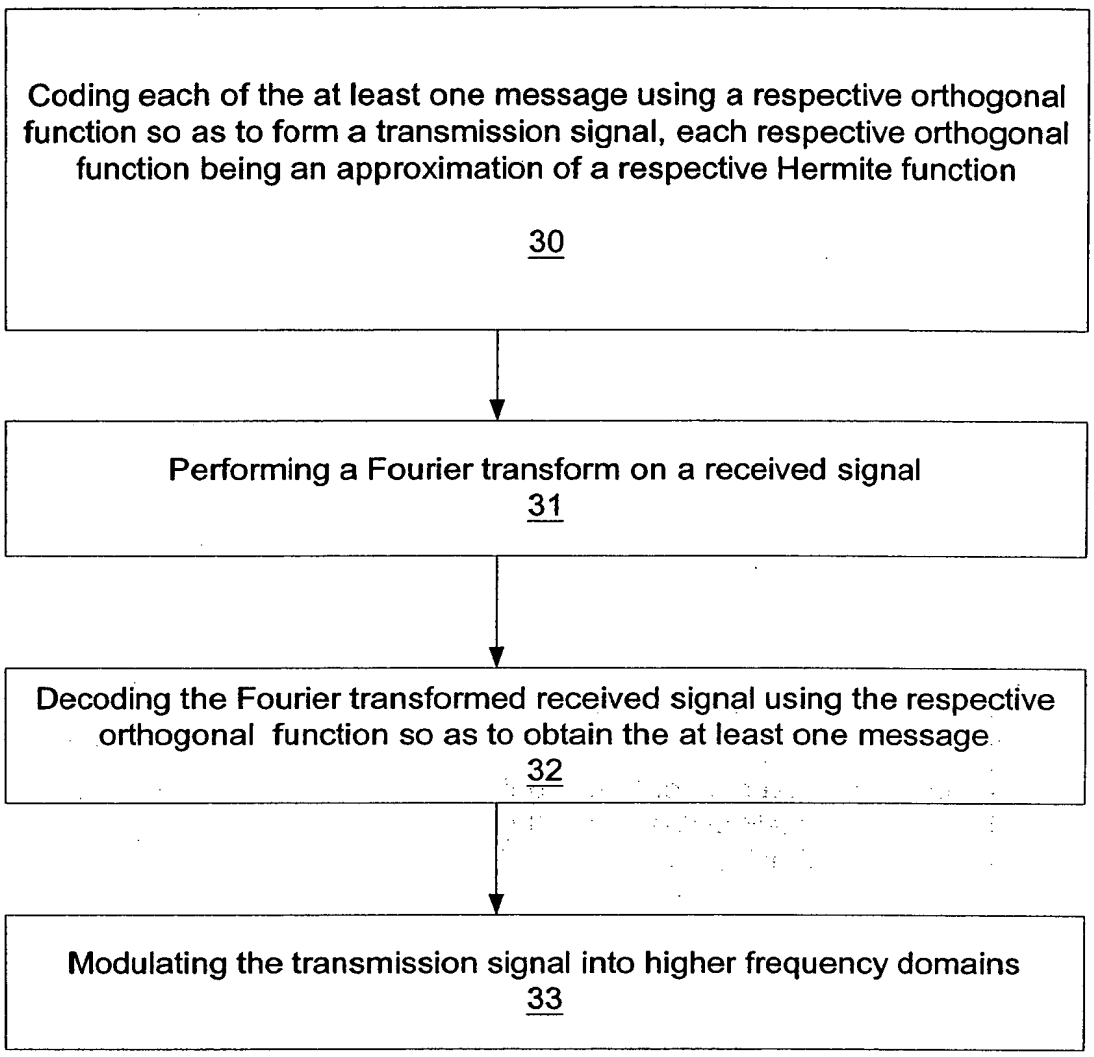

FIG. 6

PATENT & TRADEMARK OFFICE
MAR 05 2004

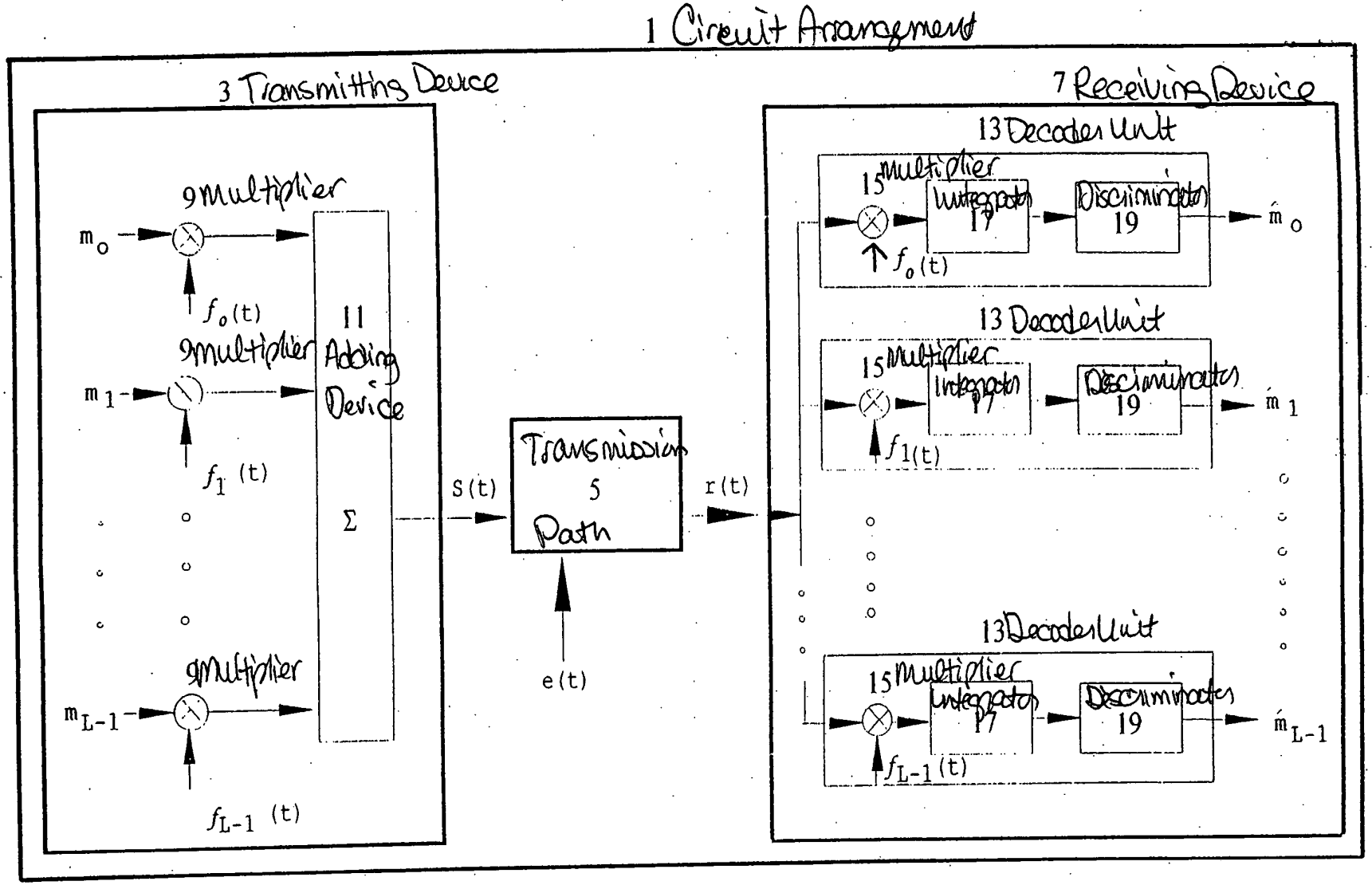

Fig. 1

[REPLACEMENT]

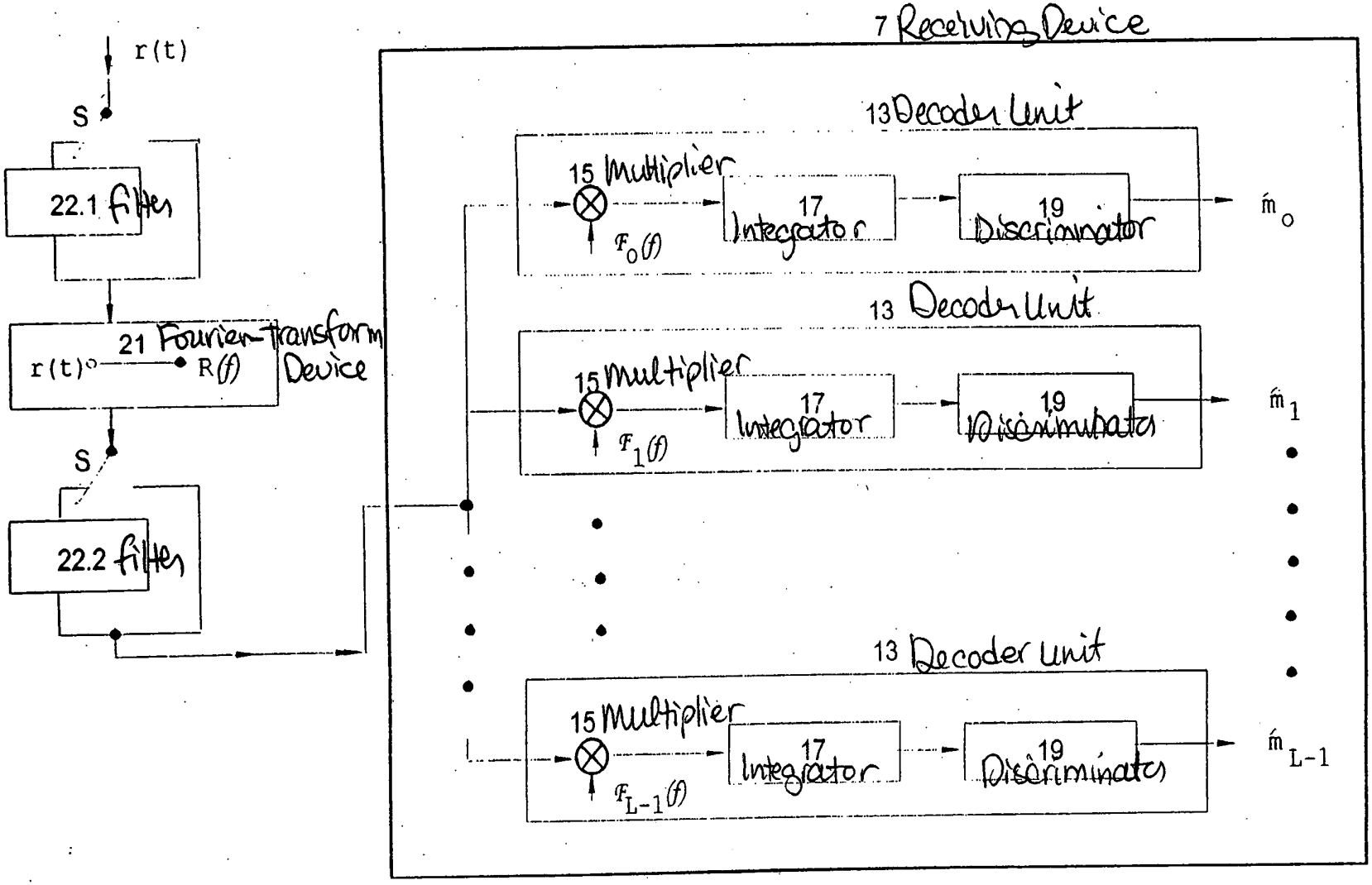

Fig. 2

[REPLACEMENT]

OIPE
PATENT & TRADEMARK OFFICE

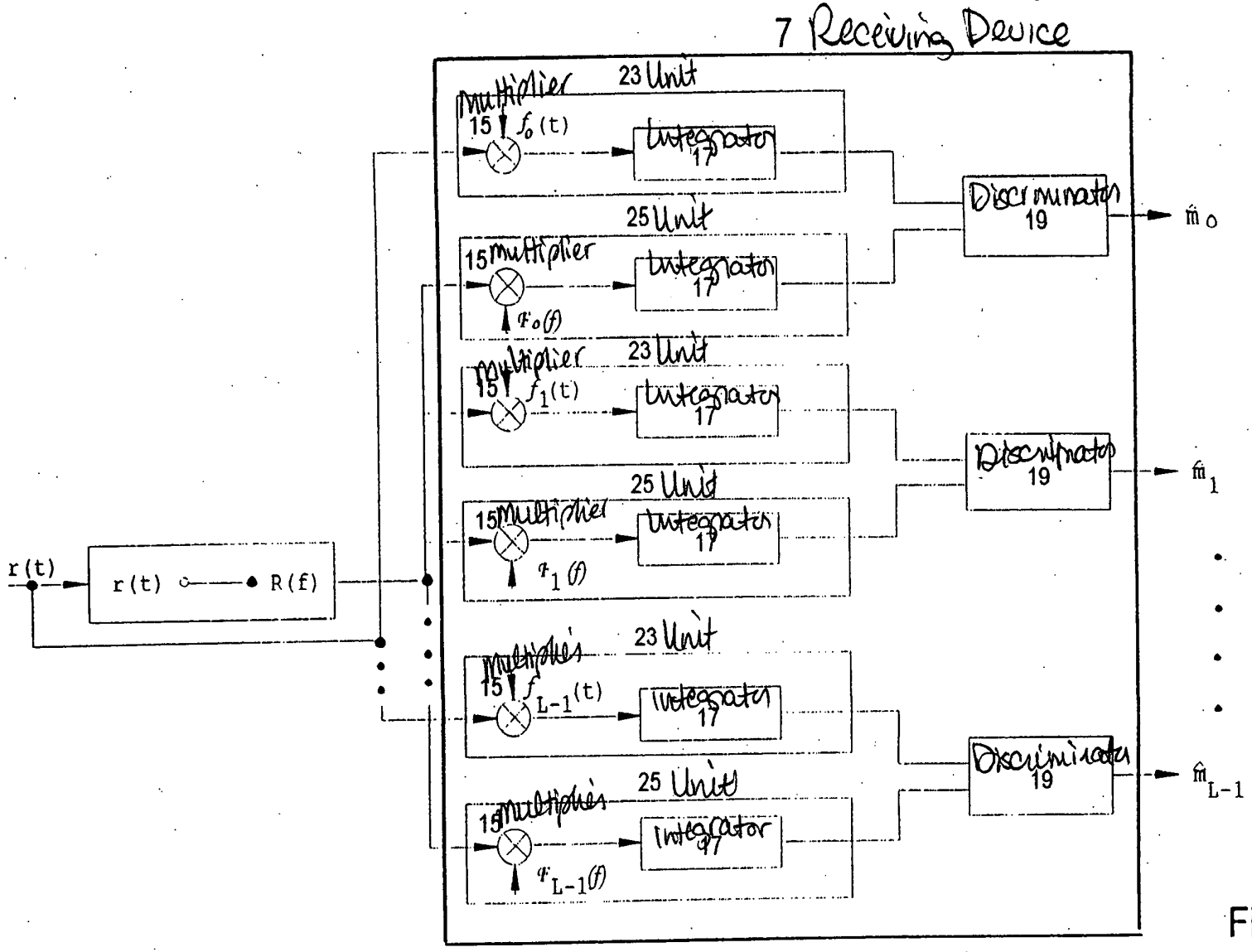

Fig.3

[REPLACEMENT]

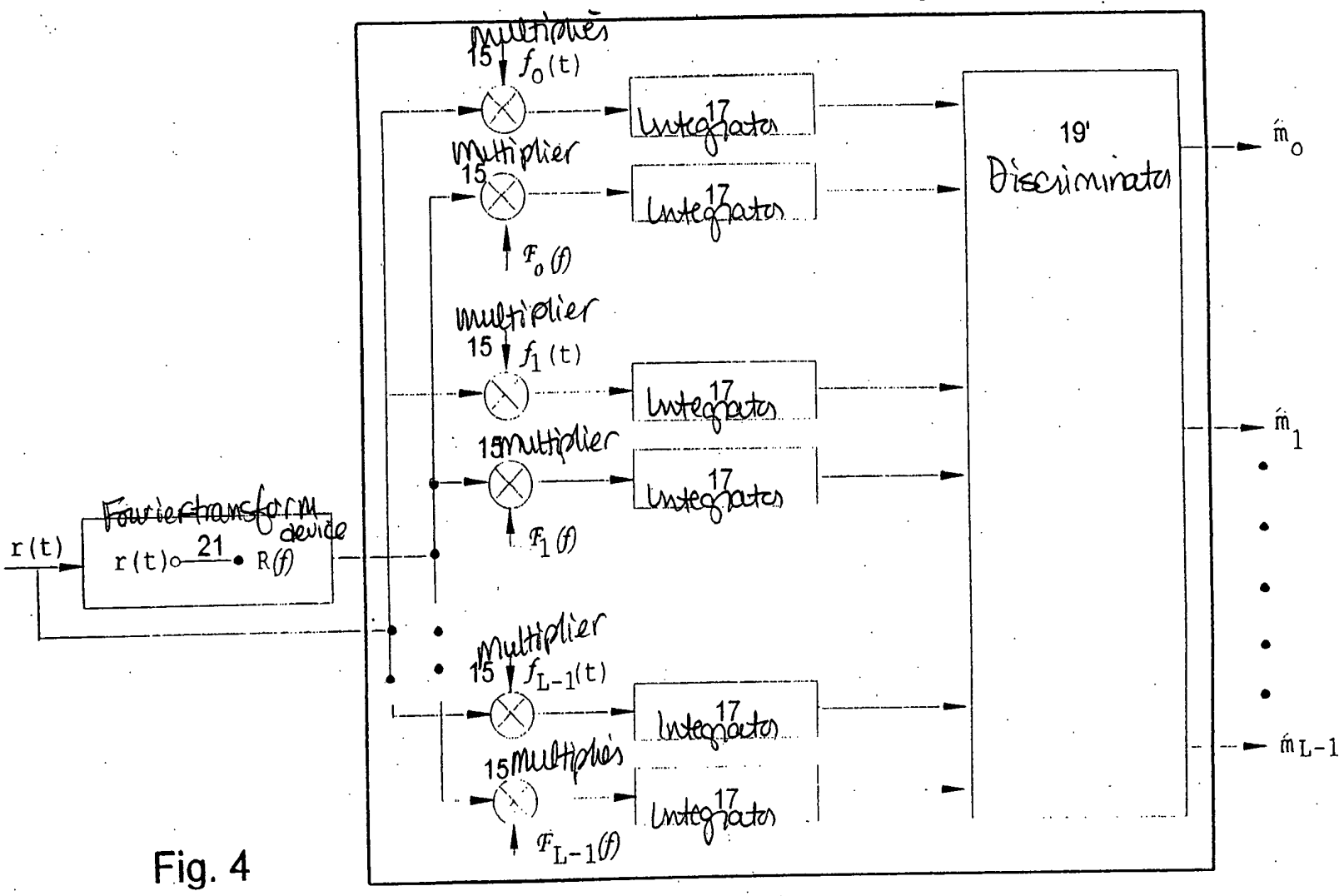

Fig. 4

[REPLACEMENT]

OIPE
AUG 05 2004
PATENT & TRADEMARK OFFICE

[REPLACEMENT]

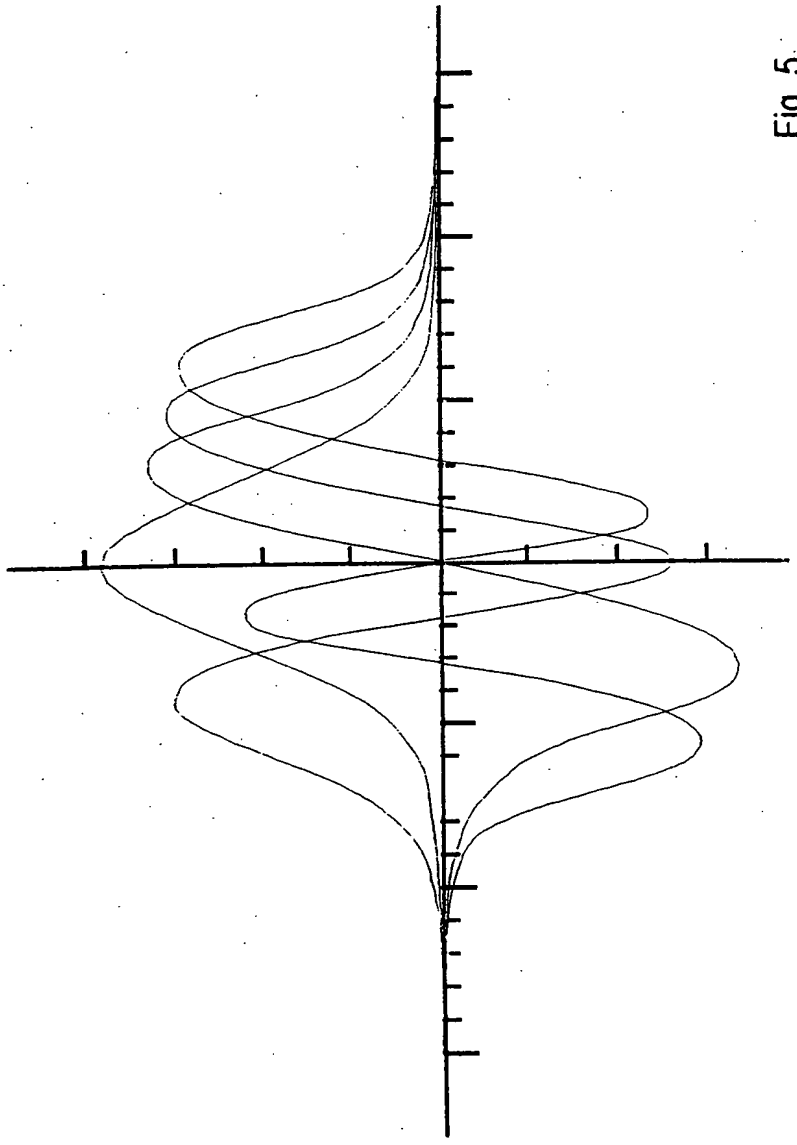

Fig. 5

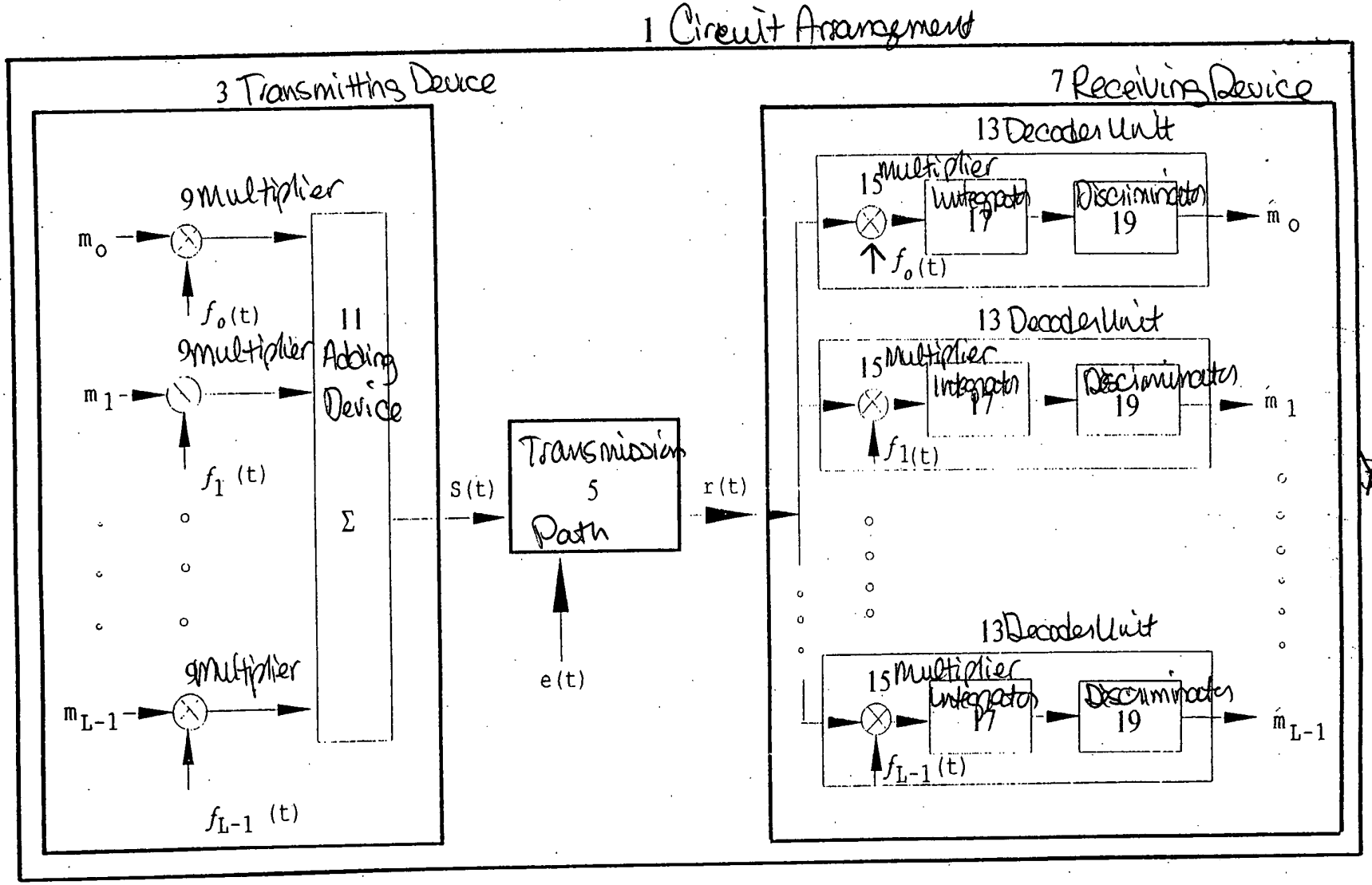

Fig. 1

[ANNOTATED]

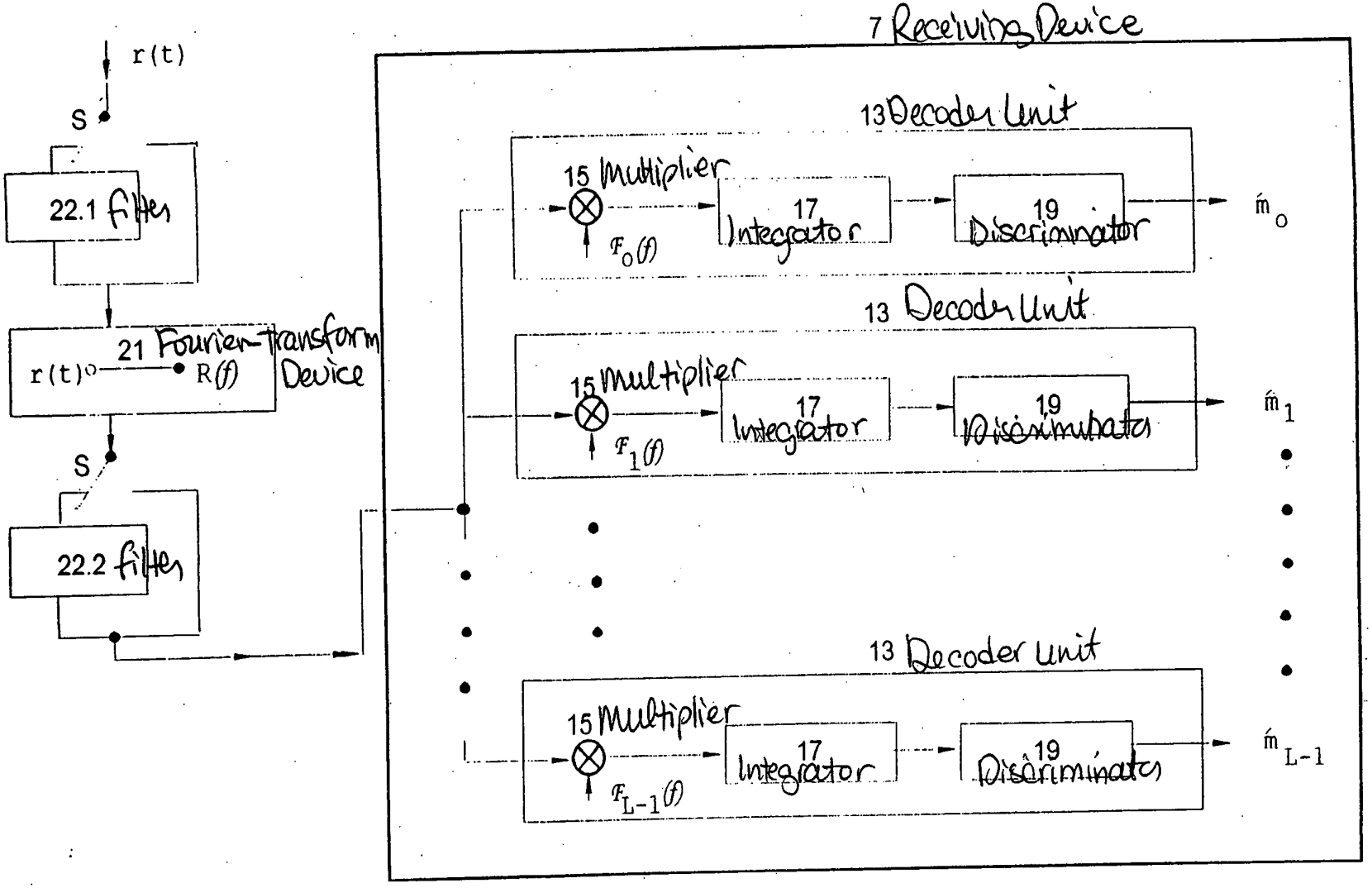

Fig. 2

[ANNOTATED]

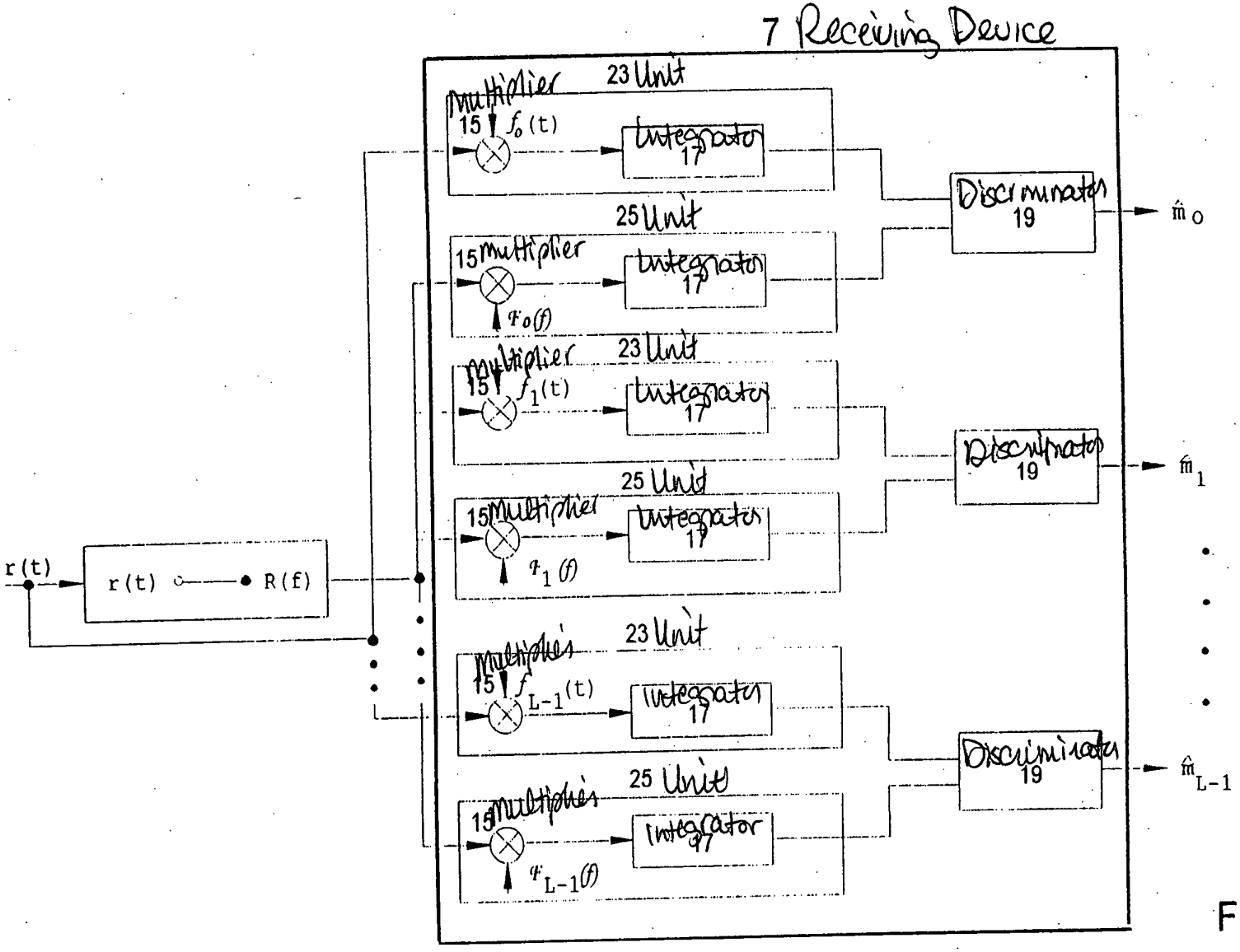

Fig.3

[ANNOTATED]

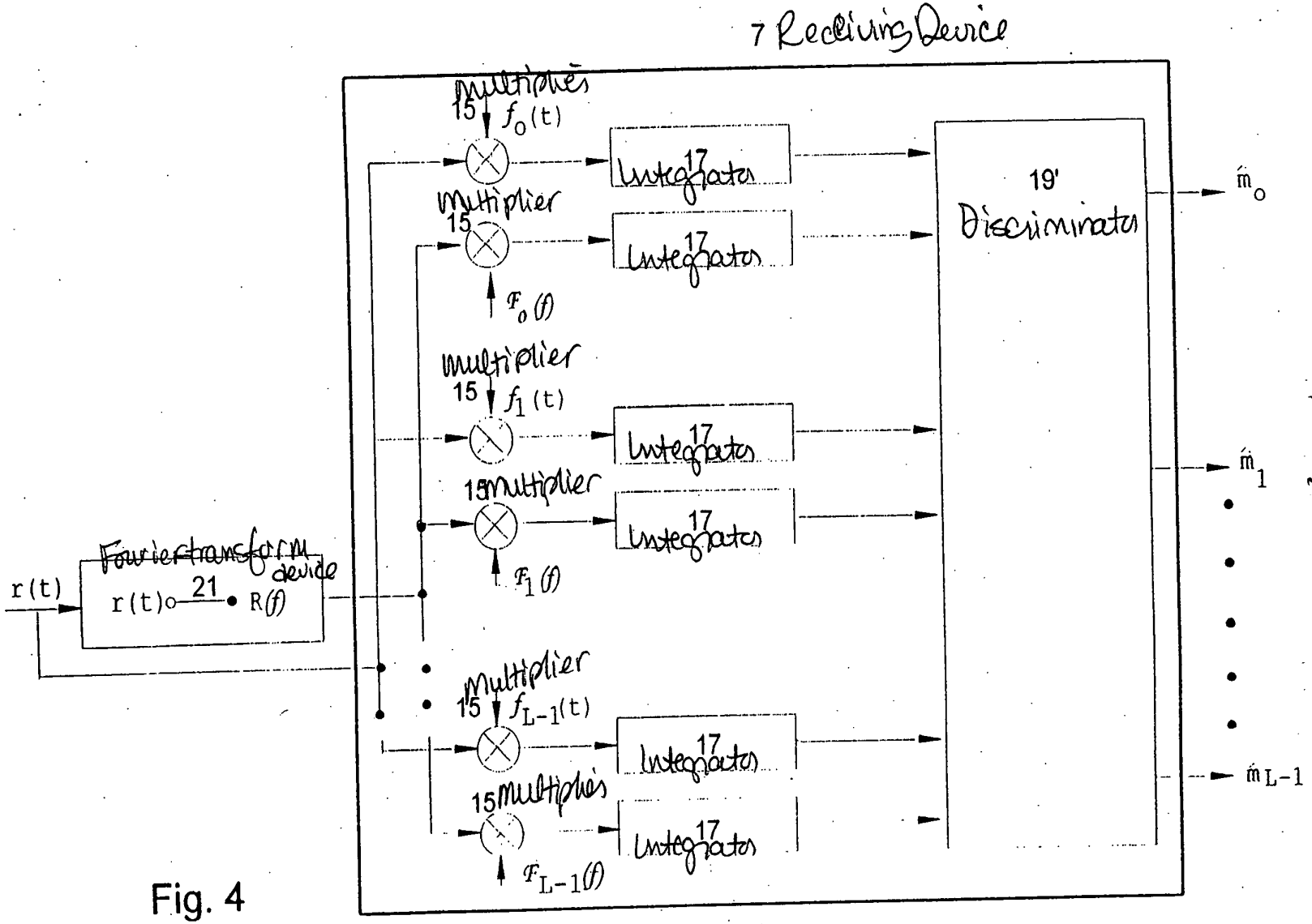

Fig. 4

[ANNOTATED]

OIPE JC16
AUG 05 2004
PATENT & TRADEMARK OFFICE

[ANNOTATED]

8/15

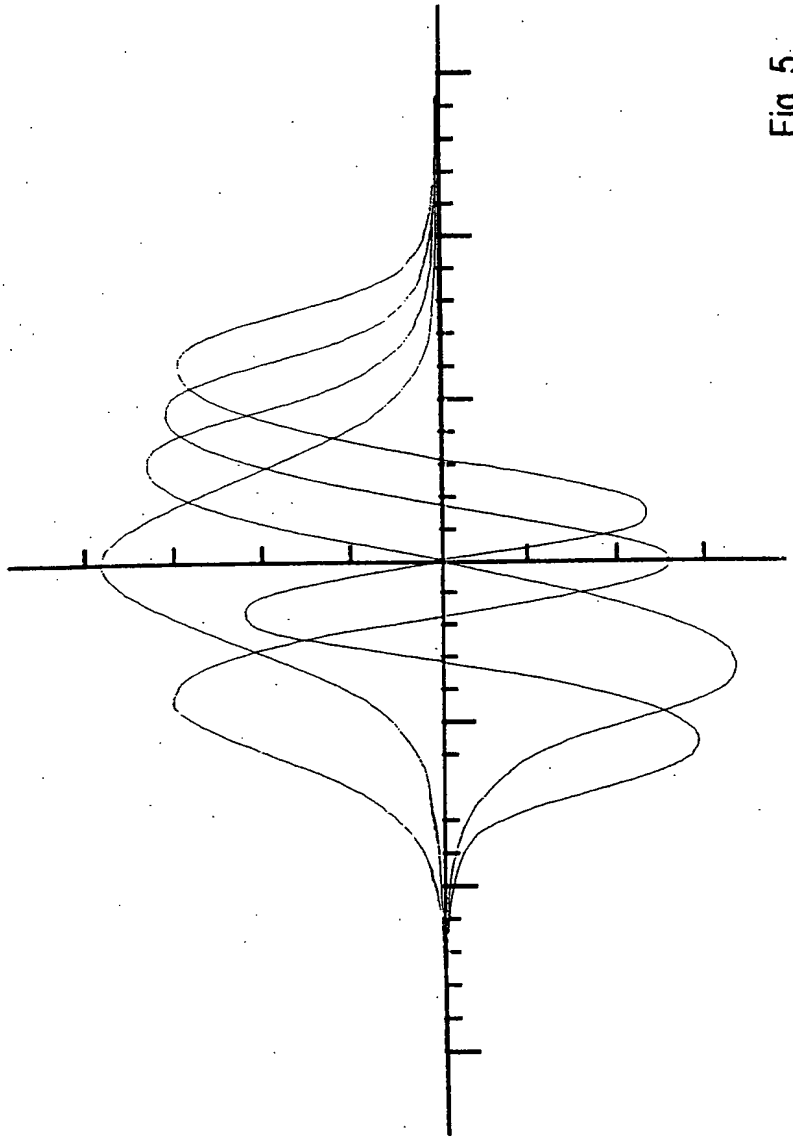

Fig. 5